HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 200207272-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Wai Yuen HO	Confirmation No.: 8419
Application No.: 10/789,744	Examiner: Leonard S. Liang
Filing Date: February 27, 2004	Group Art Unit: 2853

Title: AN AUTOMATIC TRANSMISSION SYSTEM FOR A PRINTER CARRIAGE DRIVE

Mail Stop Appeal Brief - Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF REPLY BRIEF

Transmitted herewith is the Reply Brief with respect to the Examiner's Answer mailed on October 1, 2009 .

This Reply Brief is being filed pursuant to 37 CFR 1.193(b) within two months of the date of the Examiner's Answer.

(Note: Extensions of time are not allowed under 37 CFR 1.136(a))

(Note: Failure to file a Reply Brief will result in dismissal of the Appeal as to the claims made subject to an expressly stated new ground rejection.)

No fee is required for filing of this Reply Brief.

If any fees are required please charge Deposit Account 08-2025.

Respectfully submitted,
Wai Yuen HO
By:
Timothy B. Kang
Attorney/Agent for Applicant(s)
Reg No. : 46,423
Date : December 1, 2009
Telephone : (703) 652-3817

PATENT

Atty Docket No.: 200207272-1
App. Ser. No.: 10/789,744

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s):	Wai Yuen HO	**Confirmation No.:**	8419
Serial No.:	10/789,744	**Examiner:**	Leonard S. Liang
Filed:	February 27, 2004	**Group Art Unit:**	2853

Title: AN AUTOMATIC TRANSMISSION SYSTEM FOR A PRINTER CARRIAGE DRIVE

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF - PATENTS

Sir:

The Appellant respectfully submit this Reply Brief in response to the Examiner's Answer mailed on October 1, 2009, and thus, this Reply Brief is timely filed within two months of the Examiner's Answer.

TABLE OF CONTENTS

(1) Status of Claims 3

(2) Grounds of Rejection to be Reviewed on Appeal 4

(3) Arguments 5

A. **The rejection of claims 1, 4-7, and 10-15 under 35 U.S.C. §103(a) as being unpatentable over Ito in view of Kushino and Black is improper and should be reversed.** 5

(4) Conclusion 9

(1) Status of Claims

Claims 2, 3, 8, and 9 were canceled without prejudice or disclaimer of the subject matter contained therein.

Claims 1, 4-7, and 10-15 are pending and rejected. All pending claims 1, 4-7, and 10-15 are hereby appealed.

(2) Grounds of Rejection to be Reviewed on Appeal

A. Whether claims 1, 4-7, and 10-15 were properly rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ito et al. (US Patent No. 5,097,189, hereinafter "Ito") in view of Kushino et al. (JP Patent No. 2000104799, hereinafter "Kushino") and Black et al. (US Patent No. 3,780,652, hereinafter "Black").

(3) Arguments

A. **The rejection of claims 1, 4-7, and 10-15 under 35 U.S.C. §103(a) as being unpatentable over Ito in view of Kushino and Black is improper and should be reversed.**

In attempting to rebut the arguments presented in the Appeal Brief submitted on June 9, 2009, the Examiner discusses various general principles pertaining to planetary gear assemblies. More particularly, the Examiner asserts that any of the sun gear, the planet gears and planet gears' carrier, and the ring gear "can serve as input, output, or can be held stationary." *Examiner's Answer*, page 10, last paragraph. In addition, in that section of the Examiner's Answer, the Examiner asserts that different gear ratios can be achieved depending on which of the components are chosen as the input and the output. The Examiner further discusses in great detail how the gears in general planetary gear assemblies may operate and concludes that "the Appellant makes the mistake of separating the motion of the input shaft from the motion of the output shaft." *Examiner's Answer*, page 11, first two paragraphs. The Examiner asserts that the mistake is premised on the fact that for the output shaft to rotate, the input shaft must also rotate and that the entire planetary gear assembly operates to switch between first and second gear ratios automatically based upon an operational speed of the drive motor through the use of a centrifugal clutch. *Examiner's Answer*, page 12, first full paragraph.

Regardless, however, of whether the Examiner's general discussion on planetary gear assemblies is considered to be accurate, the Examiner has still failed to establish that the proposed combination of Ito, Kushino, and Black results in the invention as claimed in independent claims 1, 7, and 14. As will become clearer from the following discussion, the

Examiner erred because Kushino pertains to a specific type of clutch assembly for motor vehicles and thus, the general planetary gear assemblies do not entirely apply to the Kushino clutch assembly.

Initially, the Examiner appears to assert that the speed of the output shaft 21 of Kushino is directly controlled by the speed of the input shaft 18. *Examiner's Answer*, page 11, lines 12-14. However, in various planetary gear assemblies, and particularly, in clutches for automobiles, the speed of the output shaft is not necessarily tied to the input shaft. For instance, during shifting operations, the output shaft is disengaged from the input shaft and thus rotates freely from the input shaft until the reengaged through the clutch assembly. In addition, depending upon the gear in which the transmission is engaged, the speed of the input shaft will have a different affect on the speed of the output shaft. In this regard, and because Kushino is clearly directed to a two way clutch assembly for use in motor vehicles, the fact that Kushino discloses that the rotation of the ring gear 29 is controlled with a centrifugal clutch 13 based upon the speed of the output shaft 21 and not of the input shaft 18 is relevant and the Examiner erred in attempting to negate its importance. As such, Kushino does not pertain to a general planetary gear assembly and thus, the Examiner erred in asserting that the speed of the output shaft 21 is correlated to the speed of the input shaft 18 in Kushino.

In addition, while Ito and Black pertain to printing apparatuses, Kushino pertains to a clutch assembly for use in motor vehicles. The clutch assembly disclosed in Kushino is therefore designed for much more rugged operations and likely for more than two gears. As such, one of ordinary skill in the art of printing apparatus would not likely have turned to the clutch assembly

in Kushino because the clutch assembly in Kushino is overly-complicated and thus overly-expensive to be practical in a printer assembly.

Moreover, the Examiner's proposed combination of Ito, Kushino, and Black would not have resulted in the claimed invention as set forth in independent claims 1, 7, and 14 because the proposed combination would still fail to disclose the planetary gear assembly disclosed in these claims. Accordingly, even assuming for the sake of argument that one of ordinary skill in the art were somehow motivated to combine Ito, Kushino, and Black as suggested by the Examiner, the proposed combination would still fail to result in the claimed invention as claimed in independent claims 1, 7, and 14.

With respect to the some of the depending claims, the Examiner relies upon the disclosure contained in paragraph 11 of Kushino where it is stated, "Next, when [the number of rotations] of the output shaft goes over the predetermined number of rotations, the clutch means connects the ring gear and the output shaft..." *Examiner's Answer*, page 13, first full paragraph. Again, as noted above, Kushino pertains to a clutch for a motor vehicle and thus, the speed of the output shaft may vary with respect to the speed of the input shaft based upon the gear in which transmission is placed. In addition, for at least the reasons presented in the Appeal Brief submitted on June 9, 2009, and contrary to the Examiner's assertions in the Examiner's Answer, the proposed combination of Ito, Kushino, and Black fails to teach or suggest the features claimed in the claims that depend upon independent claims 1, 7, and 14.

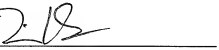
For at least the foregoing reasons, the Appellants respectfully submit that the Examiner erred in asserting that Ito alone or in combination with Kushino and Black discloses the above-identified features of independent claims 1, 7, 1and 14 and the claims that depend therefrom.

(4) Conclusion

For at least the reasons given above, the rejection of claims 1, 4-7, and 10-15 is improper. The Appellant therefore respectfully requests that the Board of Patent Appeals and Interferences reverse the Examiner's decision rejecting claims 1, 4-7, and 10-15 and to direct the Examiner to pass the case to issue.

Please grant any required extensions of time and charge any fees due in connection with this Reply Brief to deposit account no. 08-2025.

Respectfully submitted,

Dated: December 1, 2009 By 

Timothy B. Kang
Registration No.: 46,423
(703) 652-3817

MANNAVA & KANG, P.C.
11240 Waples Mill Road
Suite 300
Fairfax, VA 22030
(703) 865-5150 (facsimile)